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09/821,953	03/30/2001	Kenneth William Willman	7973MR	3897

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EXAMINER

PIERCE, JEREMY R

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 10, 2006 has been entered.

Response to Amendment

2. Applicant's amendment filed on February 10, 2006 has been entered. Claim 38 has been amended. Claims 38-42, 65-71, 74-83, and 85-111 are currently pending. The amendment is sufficient to overcome the 35 USC 103 rejections to claims 38-42, 65-71, and 95-98 because the non-woven fabric of Ngai comprises multiple fibrous layers which claim 38, by the present amendment, now specifically excludes. However, the 35 USC 103 rejections to claims 74-83, 85-94, and 99-111 are maintained because those claims do not incorporate this new limitation. New grounds of rejection based on the amendment and the discovery of new art are also set forth below.

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Claim Objections

3. Claims 71 and 87 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 71 recites the substrate "comprises at least one layer of a nonwoven material." This limitation is already accounted for in parent claim 38.

Claim 87 recites the substrate "comprises at least one layer of a nonwoven material." This limitation is already accounted for in parent claim 90.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 71 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 71 recites the substrate "comprises at least one layer of a nonwoven material." The "at least one" language is confusing because it implies that there can be more than one layer of nonwoven material. Parent claim 38 now requires that the cleaning sheet not include any additional layer of fibrous material, so claim 71 appears to be in conflict with the parent claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 74-83 and 85-94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lerner et al. (U.S. Patent No. 5,198,292) in view of Ngai (U.S. Patent No. 6,314,627).

With regard to claim 90, Lerner et al. disclose a cleaning cloth comprising pressure sensitive adhesive and tackifier (Abstract). Lerner et al. disclose using a hydroentangled web as the substrate (column 5, lines 55-66), but do not disclose hydroentangling to provide a macroscopically three-dimensional substrate. Ngai also teaches a hydroentangled nonwoven fabric that is efficient for wiping solid matter (Abstract). Ngai discloses that a three dimensional quality is provided to the fabric in the form of ridges, bumps, or other geometric configurations that are discernable to the human eye in order to provide a fabric that is far more efficient at collecting solid than a flat fabric (column 2, lines 30-67). It would have been obvious to a person having ordinary skill in the art at the time of the invention to provide a three dimensional texture to the fabric of Lerner et al. in order to improve the ability of the tack cloth of Lerner et al. to retain solid particles, as taught by Ngai.

With regard to the substrate being non-apertured limitation, the substrate of Ngai meets this claim limitation because Ngai teaches the "structured surface" may be in the

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form of a three dimensional surface or a pattern of apertures (column 2, lines 30-32).

Ngai does not require apertures, and also teaches that they are not desirable when an impervious fabric is desired (column 1, lines 36-40).

With regard to the amount of polymeric additive incorporated into the substrate, Ngai teaches that the three layer substrate will weigh between 30 and 120 grams per square meter (see column 4, line 55; column 5, lines 31-32; and column 8, lines 31-34). Lerner et al. disclose the amount of polymer material, based on the dry fabric weight, may vary between 3 and 50% depending on the desired end use (column 8, lines 19-23). It would have been obvious to a person having ordinary skill in the art at the time of the invention to use between 0.1 and 10 gsm of polymeric additive, since the percentages provided by Lerner et al. would embrace that range. Also, the amount of polymeric additive used would be a result effective variable depending on the weight of the fabric, and whether a low-activity tack cloth or high-activity tack cloth were desired for the end product (see Lerner et al., column 8, lines 19-23). It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). With regard to claims 91 and 92, similar reasoning applies to the smaller ranges of polymer additive recited in these claims.

With regard to the Average Height Differential of least 0.2 mm for the peaks and valleys, Ngai discloses transferring a pattern from a forming support, and specifically recites U.S. Patent No. 5,098,764 to Drelich et al. for an example of usable forming supports (column 2, lines 41-48). Drelich et al. disclose the forming support to have a

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height differential from peak to valley of 0.229 cm (column 11, line 8). Since the material is molded to the same shape as the forming support, the average height differential of the Ngai substrate would be at least 0.2 mm. The average height differential would also be greater than 0.4 mm (claims 74 and 85), 0.6 mm (claims 75 and 86), 1.0 mm (claim 103), or any other value less than 2.3 cm (claim 104).

With regard to claim 76, although Ngai does not disclose the shape of the raised regions, it would have been obvious to a person having ordinary skill in the art at the time of the invention to form the raised regions in the shape of a rounded parallelogram since selection of the shape is part of the process of selecting the design pattern of the nonwoven fabric. Selecting a desired pattern, absent any unexpected results, is an obvious modification to one having ordinary skill in the art. With regard to claims 77, 81, and 82, the recessed regions would form a continuous pattern using the forming supports disclosed in Drelich et al. With regard to claims 78 and 79, although neither Ngai nor Drelich et al. disclose channel width, it is reasonable to presume that the claimed width is inherent because the dimensional properties of the three-dimensional pattern of raised regions are similar. Alternatively, it would have been obvious to a person having ordinary skill in the art at the time of the invention to have the recessed pattern include a channel width between 1 and 8 mm in order to create sufficient space between raised regions so that the three-dimensional structure is properly allowed to trap solid particles, as taught by Ngai (column 2, lines 60-67). With regard to claims 80 and 83, Lerner et al. teach the entire fabric uniformly contains the polymeric additive (column 3, lines 6-9). With regard to claim 88, Lerner et al. disclose that the amount of

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tack allows for folding (column 6, line 45). With regard to claim 89, Ngai teaches the three-dimensional structure traps solid material (column 2, lines 60-67). With regard to claims 93 and 94, Lerner et al. disclose using polyisobutylene (column 6, line 54).

8. Claims 99-111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lerner et al. in view of Ngai as set forth above, and further in view of Bhattacharjee et al. (U.S. Patent No. 5,227,844).

With regard to claims 95, 96, 98-100, 102, and 103, Lerner et al. do not teach a zone on the fabric that is free of the coating composition. Bhattacharjee et al. teach that sufficient cleaning is attained when a pattern of tacky adhesive is applied to a cleaning substrate rather than a continuous coating (column 4, lines 26-46). It would have been obvious to a person having ordinary skill in the art at the time of the invention to create the cleaning cloth with at least one zone not possessing the coating in order to save on the amount of coating used while still creating a substrate with sufficient cleaning ability, as taught by Bhattacharjee et al. With regard to claims 97, 101, 104-109 and 111, the limitations of these dependent claims are addressed above. With regard to claim 110, other layers of fabric are not precluded by the recitation that the cleaning sheet is made of a single layer.

9. Claims 38-42, 65-71, 74-83, and 85-94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strickland et al. (WO 98/52458) in view of Lerner et al.

With regard to claims 38 and 90, Strickland et al. disclose a cleaning sheet having substantial macroscopic three-dimensionality (Abstract). Strickland et al. disclose the average height differential to be at least 0.5 mm, and can be as high as 6

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mm (page 3). The cleaning sheet can be made from either a single fibrous layer or multiple fibrous layers (page 7). Apertures are not provided to the fabric. Strickland et al. encourage the use of additives to the cleaning sheet, especially those that improve adherence of soil to the sheet (page 9), but Strickland et al. do not disclose adding an adhesive or tacky polymer.

Lerner et al. disclose that cleaning cloths can have improved particulate retention if treated with a composition comprising tackifier and adhesive (Abstract). Lerner et al. teach the amount of composition added onto a fabric can be between 3% and 50% by weight depending on the desired activity of the cloth (column 8, lines 19-23). The amount of polymeric additive used would be a result effective variable depending on the weight of the fabric, and whether a low-activity tack cloth or high-activity tack cloth were desired for the end product. It would have been obvious to a person having ordinary skill in the art to add between 0.1 and 10.0 gsm of polymeric additive to the fabric of Strickland et al. in order to provide the cloth with the proper amount of tack for its intended use, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Similar reasoning applies to claims 39, 40, 91, and 92.

With regard to claims 41, 42, 93, and 94, Lerner et al. disclose using polyisobutylene (column 6, line 54). With regard to the fabric texture dimensions found in claims 65-70, 74, 75, 77-79, 81, 82, 85, 86, and 89, Strickland et al. teach similar dimension (See page 8) are used in a continuous pattern of peaks and channels (See Figures 1-8). With regard to claim 76, the recessed regions can have a rounded

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parallelogram configuration (See Figure 4). With regard to claims 80 and 83, Lerner et al. teach the entire fabric may uniformly contain the polymeric additive (column 3, lines 6-9). With regard to claim 88, Lerner et al. disclose that the amount of tack allows for folding (column 6, line 45).

10. Claims 95-111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strickland et al. in view of Lerner et al. as set forth above, and further in view of Bhattacharjee et al.

With regard to claims 95, 96, 98-100, 102, and 103, Strickland et al. teach that it may be preferable to provide lower levels of additive when using an additive that improves adherence of soil to the sheet (page 9). Strickland et al. disclose applying additive "to *at least one* discrete continuous area" (page 9, emphasis added). This teaching implies that more than one discrete area may be coated with additive.

Bhattacharjee et al. teach that sufficient cleaning is attained when a pattern of tacky adhesive is applied to a cleaning substrate rather than a continuous coating (column 4, lines 26-46). It would have been obvious to a person having ordinary skill in the art at the time of the invention to create the cleaning cloth of Strickland et al. with at least one zone not possessing the coating in order to save on the amount of coating used while still creating a substrate with sufficient cleaning ability, as taught by Bhattacharjee et al. With regard to claims 97, 101, and 104-111, the limitations of these dependent claims are addressed above.

Double Patenting

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11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 38-42, 65-71, 74-83, and 85-111 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,561,354 in view of Lerner et al. Although the claims of the '354 Patent do not disclose adding an adhesive polymer to the cleaning sheet, such a practice is made obvious in light of the teachings of Lerner et al., as set forth above in the prior art rejection.

13. Claims 38-42, 65-71, 74-83, and 85-111 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9, 18-22, 24-34, 36-46, 49-53, 55-65, 67-77, 79-86, 88-92, and 96-103 of U.S. Patent No. 6,645,604 in view of Lerner et al. Although the claims of the '604 Patent do not disclose

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adding an adhesive polymer to the cleaning sheet, such a practice is made obvious in light of the teachings of Lerner et al., as set forth above in the prior art rejection.

14. Claims 38-42, 65-71, 74-83, and 85-111 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-51 of U.S. Patent No. 6,790,794 in view of Lerner et al. Although the claims of the '794 Patent do not disclose adding an adhesive polymer to the cleaning sheet, such a practice is made obvious in light of the teachings of Lerner et al., as set forth above in the prior art rejection.

15. Claims 38-42, 65-71, 74-83, and 85-111 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12, 15, 16, 19-24, 27-33, 36-47, 50-57, and 60-75 of U.S. Patent No. 6,797,357 in view of Lerner et al. Although the claims of the '357 Patent do not disclose adding an adhesive polymer to the cleaning sheet, such a practice is made obvious in light of the teachings of Lerner et al., as set forth above in the prior art rejection.

16. Claims 38-42, 65-71, 74-83, and 85-111 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8, 13, 14, 19-24, 29-38, 47-52, and 55-71 of U.S. Patent No. 6,936,330 in view of Lerner et al. Although the claims of the '330 Patent do not disclose adding an adhesive polymer to the cleaning sheet, such a practice is made obvious in light of the teachings of Lerner et al., as set forth above in the prior art rejection.

17. Claims 38-42, 65-71, 74-83, and 85-111 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-

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3, 6, 11-18, 21-25, 47-59, and 62-70 of copending Application No. 09/729,626 in view of Lerner et al. Although the claims of the '626 Application do not disclose adding an adhesive polymer to the cleaning sheet, such a practice is made obvious in light of the teachings of Lerner et al., as set forth above in the prior art rejection

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

18. Applicant's arguments filed February 10, 2006 have been fully considered but they are not persuasive.

19. Applicant argues that Drelich discloses a nonwoven substrate that includes a plurality of holes or openings. However, the teachings of Drelich are not used in the rejection.

20. Applicant argues that Ngai does not disclose what is meant by "transferring a pattern from a forming support." However, the shape of a fabric is determined by the shape of the support material on which it is formed. Ngai clearly teaches that fabrics may be produced having ridges, bumps, or other geometric configurations (column 2, lines 30-48). No official notice need be taken.

21. With regard to the arguments made as to independent claim 90, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

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22. Applicant argues that the Office Action selectively chooses individual portions of the Ngai and Lerner references without providing any reason as to why one would selectively combine those elements. However, motivation statements are provided in the rejection. Applicant does not address them.

23. Applicant argues that Lerner et al. require the cloth to be thoroughly impregnated with a tacky composition and therefore cannot be combined with Bhattacharjee et al. However, Lerner et al. teach that the goal of their invention is to provide a cleaning cloth that is inexpensive, can easily and smoothly slide across a surface, and be effective in picking up particles (column 3, lines 15-19). Bhattacharjee et al. teach all of these goals can be obtained by providing zones of tacky composition rather than using complete coatings. Therefore, it is combinable with Lerner et al.

24. Applicant argues that if one wanted to save on the amount of coating being used, they could just use a reduced amount rather than applying the same amount in zones. This may be true, but it is not what Bhattacharjee et al. teach. The rejection relies on the teachings of Bhattacharjee coupled with the desire stated in Lerner of having an inexpensive tack cloth that sufficiently holds particles.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (571) 272-1479. The examiner can normally be reached on normal business hours, but works flextime hours.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jeremy R. Pierce
Examiner
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March 20, 2006